

REMARKS

Claims 8-23 are pending. Minor editorial changes have been made to Claim 8. The amendment to Claim 14 finds support in the specification on page 17, line 15 to 20. The amendment to Claim 16 finds support in the specification on page 13, line 8. Claims 17 and 18 have been revised to refer to particular time periods which find support on page 14 of the specification, see e.g., line 9. Accordingly, the Applicants do not believe that any new matter has been added.

Rejection—35 U.S.C. §112, first paragraph

Claims 8-23 were rejected under 35 U.S.C. 112, first paragraph, as lacking adequate written description for particular time, temperature and pressure ranges. Some of these issues have been addressed by the amendments above. The term “of the order of milliseconds” previously used in Claim 8 (see amended Claim 17) finds inherent support in the nature of dynamic homogenation, for example, in the flow characteristics of dynamic homogenizer model *Emulsiflex-C 160* described on page 14, line 9. This homogenizer allows a constant flow rate under 160 liters per hour meaning that each milliliter is submitted to the dynamic high pressure for a period of 183 milliseconds. Thus, this time period would be known to those in the art using dynamic homogenizers like the Emulsiflex C- 160. Moreover, it is inherently disclosed by the specification because it is easy for someone skilled in the art to calculate the period of time each milliliter of milk is treated under all pressure based on the disclosed flow rate of 160L/hr.

Rejection—35 U.S.C. §112, second paragraph

Claims 8-23 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite. The Applicants submit that this rejection is moot in view of the explanation

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regarding the limitation "milliseconds" above. That is, it is considered that the treatment for each milliliter of liquid is submitted to the pressure during less than 27 milliseconds.

Therefore, the Applicants respectfully request that this rejection now be withdrawn.

Rejection—35 U.S.C. §102

Claims 8-10, 12, 13, 16, 19 and 23 were rejected under 35 U.S.C. 102(b) as being anticipated by DE 3903648A. This document does not anticipate the present claims because it does not disclose continuously passing a liquid food product through a homogenizing valve as demonstrated in the present application. In addition, this reference does not disclose the use of elements such as the passage time in the homogenizing valve.

Instead, this document refers to a method making use of a static homogenizer which is quite different from the dynamic homogenization used in the present invention.

Accordingly, the Applicants respectfully request that this rejection now be withdrawn.

Rejection—35 U.S.C. §102

Claims 8, 10, 12, 13, 19, 20 and 23 were rejected under 35 U.S.C. 102(b) as being anticipated by SU 16660218A. This document does not anticipate these claims because the apparatus used to perform the homogenization is quite different to the homogenizer making use of the dynamic high pressure and a compressing valve that causes flow disturbance through the passage the valve, which induces the disruption of bacteria and other microorganisms. Dynamic homogenization is not claimed or described by the cited prior art document, nor is the present invention's passage or treatment to induce homogenization.

Accordingly, the Applicants request respectfully that this rejection now be withdrawn.

Rejection—35 U.S.C. §102

Claims 8-19 were rejected under 35 U.S.C. 102(b) as being anticipated by Paquin et al., US Patent No. 6,511,695. Paquin is directed to a process for denaturing proteins and not to removing reducing the number of microorganisms in a liquid food. It does not contemplate selection of a food product in need of reduction of microorganisms, therefore does not anticipate the present invention because it does not disclose that the treatment by homogenization as described therein can lead to reduction of microorganisms, such as bacteria and viruses. Paquin is only directed to modifying the consistency and firmness and viscosity of the gel based on a milk-derived composition. Nowhere in this application is the reduction and treatment of the medium to reduce the number of microorganisms even remotely proposed. Accordingly, the Applicants request that this rejection also be withdrawn.

Rejection—35 U.S.C. §103

Claims 21 and 22 were rejected under 35 U.S.C. 103(a) as being unpatentable over DE 3903648A in view of Quinet et al., U.S. Patent No. 5,114,733. Claims 21 and 22 are directed to removing microorganisms from liquid food fat or oil using dynamic high-pressure homogenization as described in Claim 8.

DE 3903648A is directed to virus inactivation in liquids by causing cavitation, for example, ultrasonically or by passage through a homogenizer nozzle, see English abstract. This document does not specifically describe dynamic high-pressure homogenization or passing a liquid food product through such a homogenizer at least three times as required by independent Claim 8.

Quinet is directed to a method for preparing a salad product and an emulsion involving pasteurizing a container containing the salad mixture under increased pressure, see

abstract, step (iv). This document does not specifically describe dynamic high-pressure homogenization or passing a liquid food product through such a homogenizer at least three times as required by independent Claim 8. Moreover, viral contamination in salad dressings or oils is not mentioned by either cited document. Thus, there would be no motivation for combining the teachings of the two references. Thus, neither document suggests or provides a reasonable expectation of success for the present invention, nor provided any suggestion for combining these two disparate documents.

Moreover, even were there some suggestion in the art to combine these two references, it would not be possible to directly deduce the subject matter of the present application, in particular as applied to treatment of liquid food products such as milk. In fact, treatment of fat or oil contained in milk is of very low percentage. It is known in the art that fat concentration in milk is less than 3%. Therefore, someone skilled in the art could not deduce that it is possible to treat in aqueous solution such as milk by considering medium containing high concentration of fat or oil as it is described in the reference of Quinet et al. Therefore, no one skilled in the art, without extensive experimentation and demonstration could be led to the subject matter as claimed in the application. Accordingly, the Applicants respectfully request that this rejection be withdrawn.

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CONCLUSION

In view of the above amendments and remarks, the Applicants respectfully submit that this application is now in condition for allowance. Early notification to that effect is earnestly solicited.

Respectfully submitted,

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